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ABSTRACT

This vocational instructional module on safety clothing for welding is one of eight such modules designed to assist recently arrived Arab students, limited in English proficiency (LEP), in critical instructional areas in a comprehensive high school. Goal stated for this module is for the student enrolled in welding classes to learn the terminology of safety clothing and be able to dress for arc welding. Each module consists of these parts: title; program goal and performance objectives; a pronunciation key; a language page which offers the pronunciation, definition, and usage of key terms in English and in Arabic; a pretest; bilingual (English and Arabic) language (vocabulary and usage) activities; evaluation; pretest and activity answer sheets; and a list of supplementary materials and their location. For each of the four activities in this module the objective, a list of materials needed, procedure, and evaluation are provided in addition to the necessary activity sheets or pages. (YLB)

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FORDSON BILINGUAL DEMONSTRATION PROJECT

برنامج فوردسون النموذجي الثنائي اللغة

ED2611179

WELDING: SAFETY CLOTHING

الالبسة الواقية للحّام

CE042334

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ABOUT THE **PROJECT**

The Fordson Arabic Bilingual Demonstration Project is designed to assist recently arrived Arab students, limited in English proficiency (LEP), to adapt to a large and comprehensive high school. The project consists of academic and vocational instructional modules, reading services to teachers and students, bilingual aide and resource services, computer and television modules, staff development activities, and home-community liaison.

ABOUT THE INSTRUCTIONAL **MODULES**

The modules were designed to assist LEP students in critical instructional areas throughout the school curriculum. These areas of focus were determined by a needs survey of the entire Fordson school community. Each module consists of seven parts: title, objectives, pretest, language (vocabulary and usage) activities, evaluation, and supplementary materials. Modules were translated, duplicated, and field tested.

ABOUT THE **AUTHOR**

Susan Field did her undergraduate work at Wayne State University and her graduate training at the University of Michigan. Susan has worked for 11 years in Dearborn teaching business subjects and coordinating the Special Needs Project in the vocational education program at Fordson High School. The major concepts of this unit were those defined as critical for special needs students to identify and dress in welding safety clothing.

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W E L D I N G

SAFETY CLOTHING

Developed By:
Susan Field

This bilingual module has been developed to assist limited English proficiency students in welding to learn the terminology of safety clothing and be able to dress for welding. The unit is designed for students enrolled in welding classes.

GENERAL OBJECTIVE: The student will use and identify proper protective clothing and dress for arc welding, to the satisfaction of the teacher or aide.

SPECIFIC OBJECTIVES: Given slides, cassette, module, writing instrument and clothing, the student will:

1. read, pronounce, spell and write, terms related to welding.
2. read, pronounce, spell, and write, the parts of the safety clothing correctly.
3. identify clothing for arc welding accurately.
4. state the purpose of safety clothing accurately.
5. label clothing on drawing with 80% accuracy.

PRETEST اختبار تمهيدي

Write the names of the parts of the welder's safety clothing on these pictures.
اكتب أسماء أجزاء اللباس الواقي على هذه الصور.

Why must the welder wear this clothing? لماذا يجب على اللحام لبس هذا اللباس ؟

Put on all the safety clothing. Show your teacher and tell what each part is and why you need to wear it.
ضع عليك اللباس الواقي، أر استاذك وعرف عن كل جزء ، ما هو، ولماذا نحتاج أن نلبسه ؟

PRONUNCIATION KEY

/a/ as in Adam

/ā/ as in cake

/e/ as in let

/ē/ as in meet

/i/ as in sit

/ī/ as in ice cream

/o/ as in hot

/ō/ as in Coke

/u/ as in Seven Up

/ū/ as in blue

/b/ as in boy

c equals /s/ as in cents (10¢)
/k/ as in cat

/d/ as in day

/f/ as in four

g equals /g/ as in go
/dz/ as in page

/h/ as in he

j equals /dz/ as in jail

/k/ as in kick

/l/ as in Cola

/m/ as in man

/n/ as in man

/p/ as in Dr. Pepper

qu equals /kw/ as in quit

/r/ as in run

/s/ as in sun

/t/ as in ten

/v/ as in van

/w/ as in woman

/x/ as in extra

/y/ as in yet (sometimes /ē/ as in many)

/z/ as in zebra

/sh/ as in shut

/ch/ as in church

/ng/ as in sing

/th/ (voiced) as in this

/th/ (unvoiced) as in thing

oo equals /ū/ as in food
/u/ as in good

LANGUAGE PAGE

To the teacher: You have at least three options in using this page:

a. Have the students read, pronounce, spell and use in a sentence (orally and written) each vocabulary item.

b. Read each item to the student and have him say it after you. Discuss at more length any item that would help the student in understanding it.

c. Use this page only as a reference page to be used as needed in the activities whenever the word is found.

Vocabulary:

1. vest (vest) ..... ١. سترة علوية لحماية الجزء الأعلى من الجسم (صدرة)
2. bib (bib) ..... ٢. غطاء جلدي لحماية اجزاء الصدر
3. apron (ā' prun) ..... ٣. وزرة عمل
4. safety glasses (sāf'-ti glas'-es) ..... ٤. نظارة وقائية
5. helmet (hel'-met) ..... ٥. خوذة
6. band (band) ..... ٦. عصابة
7. lens (lenz) ..... ٧. عدسة
8. gloves (gluvz) ..... ٨. قفازات

For the student:

You are going to learn:
to identify the proper protective clothing for arc welding.

سوف تتعلم:
كيف تتعرف على الثياب الواقية المناسبة للحام القوسي .

In order to do this you will be given:
slides, a cassette, a writing instrument and this module.

لكي تقوم بذلك ستعطى:
صور، آلة تسجيل، وقلم للكتابة وهذا النموذج الدراسي (الكتيّب).

You will be doing the following:
looking at slides and listening to a cassette; then completing the pages in your module.

ستقوم بما يلي:
راقب الصور واستمع الى المسجلة، ثم اكمل الصفحات على هذا النموذج المعطى لك (الكتيّب).

We will know you can do this when:
you have completed the post test with 80% accuracy.

سنعرف انك تقدر أن تقوم بهذا الأمر عندما:
تكمل الاختبار اللاحق بمعدل نجاح ٨٠ في المئة .

STUDENT ACTIVITY 1

DIRECTIONS:
Read, pronounce, and spell each word. Read each sentence. When you finish the entire list, write all the words and the sentences on your paper.

التعليمات :
اقرأ، الفظ وهجيء كل من الكلمات التالية. ثم اقرأ كل جملة. عندما تنتهي من اللائحة كلها، اكتب جميع الكلمات والجمل على ورقتك.

1. metal - (met'-al) n. ..... معدن ٠١
You can join two pieces of metal.

2. burn - (bern) v. ..... يحرق ٠٢
Hot metal will burn you.

3. radiation-(rā-dē-ā'-shun) n. ..... اشعاع ٠٣
Radiation can cause serious burns.

4. protect-(prō-tekt') v. ..... يحمي ٠٤
You can protect yourself from burns and radiation.

5. wear-(wār) v. ..... يلبس ٠٥
Wear extra clothing to protect yourself when welding.

6. safety-(saf-ti) n. ..... أمان (وقاية) ٠٦
You must wear safety clothing to protect yourself.

7. leather-(le-ther) n. ..... جلد ٠٧
Safety clothing is made of leather.

8. attach / attached ..... يصل / موصول ٠٨
(u-tach') (u-tacht) v
The parts of leather safety clothing are attached together.

STUDENT ACTIVITY 1 (continued)

9. snaps - (snaps) v. ..... ٩. مشابك

Snaps are used to attach leather safety clothing together.

10. debris - (dā-brē') n. ..... ١٠. انقاض أو فتات

Leather safety clothing protects you from hot debris.

11. adjust - (ad-just') v. ..... ١١. يعدّل (يكيّف)

You can adjust your helmet with the head band.

Now: Turn on the slide viewer with slides of safety clothing. Turn on the cassette that goes along with it. Look at slides 1 through 12 and listen to the tape that goes with them. Have a pencil ready to use. Look at the next page as you listen.

والآن : أدر آلة الصور الخاصة بالالبسة الواقية . أدر آلة التسجيل . انظر الى الصورة من ١ حتى ١٢ واستمع الى الشريط المرافق لها . تأكد من وجود قلم رصاص للاستعمال . انظر الى الصفحة التالية بينما تستمع الى الشريط .

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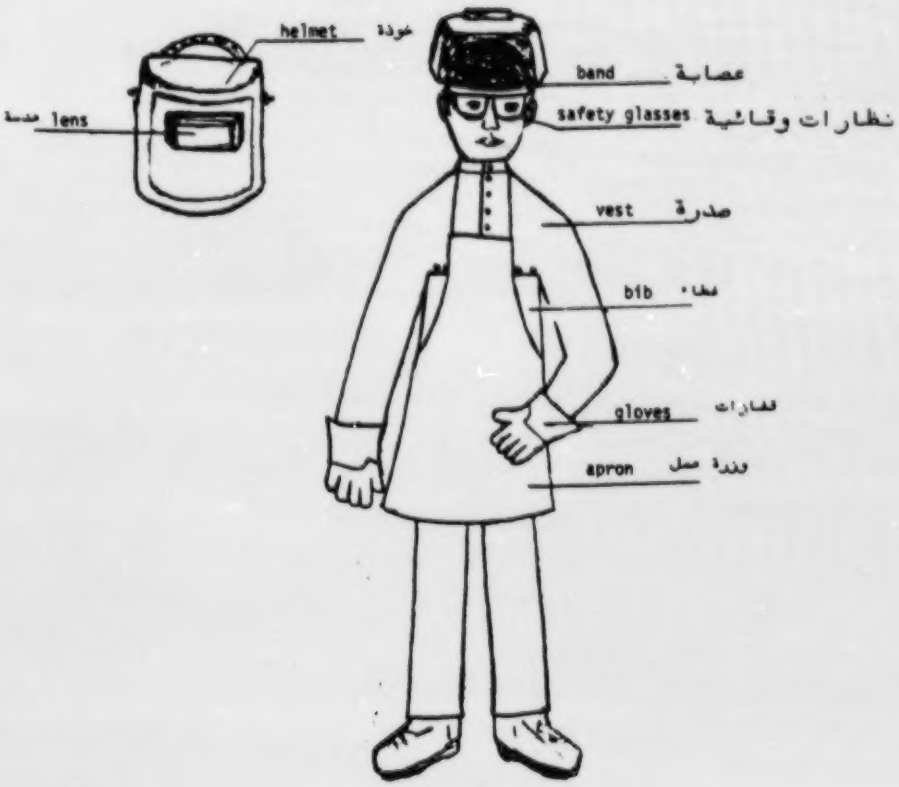
STUDENT ACTIVITY 2

DIRECTIONS:
After you listen to the tape, stop the machine. Look at the picture below and then read the sentences. Repeat until you can remember all eight parts of the safety clothing.

التعليمات :
بعد الاستماع الى الشريط ، اوقف الآلة .
انظر الى الصورة ادناه واقرأ الجمل.
كرّر الاستماع الى الشريط حتى تحفظ كل الاجزاء الثمانية للباس الواقي .



This welder, dressed in safety clothing, is ready to weld. His clothing is very important to protect him from burns and radiation.

هذا الشخص اللّحام الذي يرتدي اللباس الواقي ، على أهبة الاستعداد لأن يبدأ اللحام . ان لباسه مهم جدا" لحمايته من الحروق والاشعاعات .

Go on to the next page.

امض الى الصفحة التالية .

STUDENT ACTIVITY (continued)

DIRECTIONS:
Select the correct answer to the question and put a circle around the letter beside it.

التعليمات :
اختر الجواب الصحيح للسؤال ثم ضع دائرة حول الحرف المحاذي للجواب الصحيح .

Why must a welder wear safety clothing?

لماذا يجب على اللّحام أن يلبس ثيابا واقية ؟

A. so he is up to date in style of dress

أ ـ لأن هذه هي "موضة" العصر؟

B. to protect himself from burns and radiation

ب ـ لكي يحمي نفسه من الحروق والاشعاعات .

C. so he doesn't look different than other welders

ت ـ حتى لا يظهر بمظهر مختلف عن اللحامين الآخرين .

DIRECTIONS:
Put a circle around the correct answer below the sentence.

التعليمات :
ضع دائرة حول الجواب الصحيح تحت الجملة .

All a welder must wear to protect himself is a helmet.

كل ما يجب أن يلبسه اللّحام لحماية نفسه هو خوذة توضع على الرأس .

true / false

صح / خطا

Go on to next page.

امض الى الصفحة التالية .

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STUDENT ACTIVITY 3

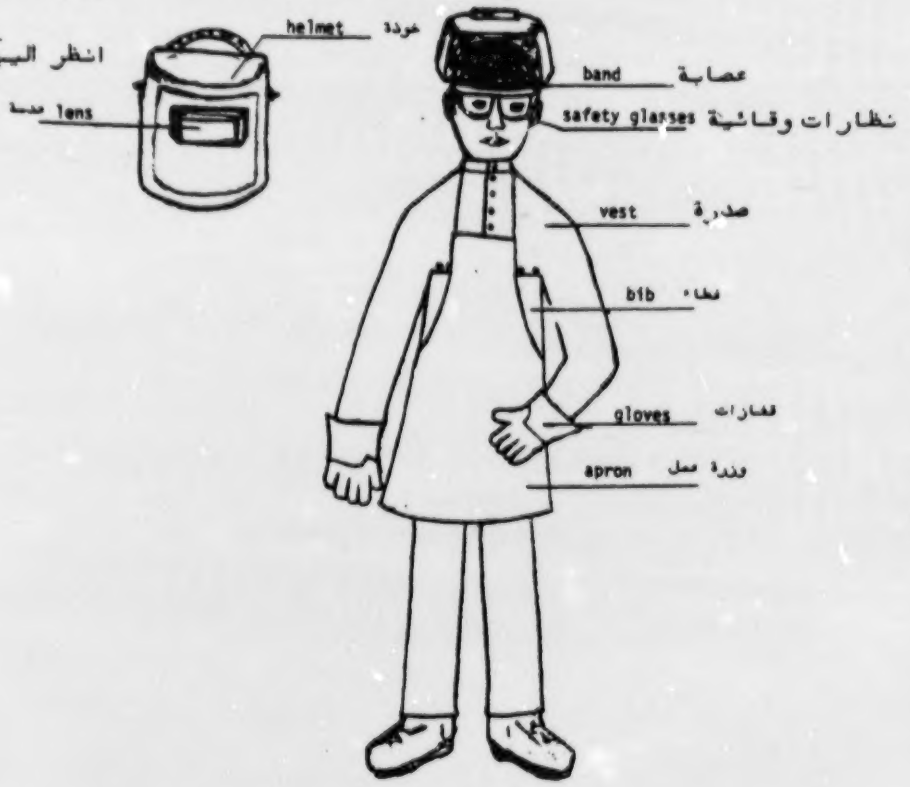
DIRECTIONS:
Read the directions below the picture and do as they tell you.

التعليمات :
اقرأ التعليمات الموجودة تحت الصورة ونفذها .

There are several parts to the welder's safety clothing.

هناك عدة اجزاء من الثياب الواقية للّحام .

Look at them. انظر اليها .



Put your finger on the vest.	Write vest.	v _ _ _
Put your finger on the bib.	Write bib.	b _ _
Put your finger on the apron.	Write apron.	a _ _ _ _
Put your finger on the glasses.	Write glasses.	g _ _ _ _ _ _
Put your finger on the helmet.	Write helmet.	h _ _ _ _ _
Put your finger on the lens.	Write lens.	l _ _ _
Put your finger on the band.	Write band.	b _ _ _
Put your finger on the gloves.	Write gloves.	g _ _ _ _ _

STUDENT ACTIVITY 4

DIRECTIONS:
Turn on your machine again. Listen carefully and follow directions.

التعليمات :
أدر الآلة ثانية. اصغ جيدا" واتبع التعليمات.

Write your answers here.

اكتب أجوبتك هنا .

Slide #13

الصورة رقم ١٣

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

After you have filled in the blanks, turn on the machine to hear the correct answers.

بعد أن تملأ الفراغ، أدر الآلة للاستماع الى الاجوبة الصحيحة.

Slide #14

الصورة رقم ١٤

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

After you have filled in these blanks, turn on the machine again to hear the correct answers.

بعد أن تملأ الفراغ، أدر الآلة ثانية للاستماع الى الاجوبة الصحيحة.

STUDENT ACTIVITY 4 (continued)

DIRECTIONS:
Read question number 1.

التعليمات :
اقرأ السؤال رقم ١.

Question 1: (slide 15)
What is wrong with this picture?

السؤال ١: (صورة ١٥)
ما هو الخطأ في هذه الصورة؟

Write your answers here:

اكتب أجوبتك هنا :

1._____

2._____

When you finish writing the above, start the tape again to hear the correct answers.

عندما تنتهي من الكتابة فوق ، أدر الشريط ثانية للاستماع الى الاجوبة الصحيحة .

In slide 16 there are 5 things wrong.

هناك خمسة أخطاء في الصورة رقم ١٦.

Question 2: (slide 16)
What is wrong with this picture?

السؤال رقم ٢: (صورة ١٦)
ما هو الخطأ في هذه الصورة؟

Write your answers here:

اكتب اجوبتك هنا :

1._____

2._____

3._____

4._____

5._____

After you finish writing the above, start the tape again to hear the correct answers.

عندما تنتهي من الكتابة فوق ، أدر الشريط ثانية واستمع الى الاجوبة الصحيحة .

Turn page for question 3.
Slide 17.

اقلب الصفحة . سؤال ٣. صورة ١٧.

STUDENT ACTIVITY 4 (continued)

In slide 17 there are four things wrong.

في الصورة ١٧ هناك اربعة أخطاء.

Question 3: (slide 17)

سؤال ٣: (صورة ١٧)

What is wrong with this picture?

ما هو الخطأ في هذه الصورة؟

Write your answers here:

اكتب اجوبتك هنا:

1. _____

2. _____

3. _____

4. _____

After you finish writing the above, start the tape again to hear the correct answers for slide 17 and the rest of the tape.

بعد أن تنتهي من الكتابة فوق ، ابدأ الشريط ثانية واستمع الى الاجوبة الصحيحة للصورة ١٧ ولبقية الشريط .

EVALUATION

Pretest should be used as post test evaluation.

SUPPLEMENTARY MATERIALS

What did you use	Where to find it
Slides and cassette presentation on safety clothing for welding.	Fordson High School Media Center

The slides and cassette presentation that accompanies this instructional module are available from the Demonstration Project at a nominal cost. Please contact us for details.

SLIDES FOR SAFETY CLOTHING TAPE

#1 Focus

#2 Advance with tone - Start tape

#3 Person Welding

#4 Vest and Bib

#5 Vest

#6 Bib

#7 Apron

#8 Glasses

#9 Helmet and Lens

#10 Head Band

#11 Glasses and Helmet on Welder

#12 Gloves

#13 Entire Outfit

#14 Entire Outfit

#15 Clothing Parts Numbered

#16 Clothing Parts Numbered

#17 What is Wrong? (with the welder's outfit)

#18 What is Wrong?

#19 What is Wrong?

#20 Work on Module

DIALOG FOR SAFETY CLOTHING TAPE

This particular tape was recorded in English only. However, there is a tape recorded in both English and Arabic for the limited English students.

Slide #1 Focus

Slide #2 Advance with tone - Start tape

Slide #3 The student's safety clothing must be worn while welding to protect the welder.

Slide #4 In the Fordson Welding Shop, you must wear a leather vest and bib.

Slide #5 The vest is placed on the body in this way. It is to protect the welder from burns and radiation.

Slide #6 The bib is attached to the vest with snaps. This is to protect the welder from burns and radiation.

Slide #7 The next piece of clothing is a leather apron. It is placed on the welder in the following way and tied in the back. The apron is used to protect the welder's legs from burns and radiation and also falling metal.

Slide #8 Forth, safety glasses must be worn at all times to protect the welder's eyes from flying metals and debris.

Slide #9 Fifth, is a welder's helmet. The helmet is used to protect the face, head, and eyes. It must be adjusted so the welder can see his work through the lens. The lens must be clean so the welder can see his work.

Slide #10 The head band for size must be moved to fit the welder. You must be careful not to damage the plastic bands when you adjust them.

Slide #11 If you are watching someone else weld, you must wear a helmet in addition to glasses.

DIALOG FOR SAFETY CLOTHING TAPE

(continued)

Slide #12 Leather gloves must be worn. The gloves will protect the welder's hands from burns and radiation. They are not to be used for picking up hot metal and must be kept dry at all times.

Slide #13 Here you can see a welder dressed in complete safety clothing.

Slide #14 Look at your written module. Page 3 has a list of important vocabulary words. Review them. Say them to yourself. Now stop the tape and complete pages 4 through 9 in your module. When you have finished, start the machine again.

Now turn to page 10 in your module.

Slide #15 On this slide, there are numbers on the safety clothing. See if you can identify each number. Stop the tape and write your answers on page 10 in your module.

When you have finished, start the tape again to hear the correct answers.

The answers are: Number 1 - apron (say and spell the word)

Number 2 - lens

Number 3 - vest

Number 4 - helmet

Number 5 - bib

Number 6 - gloves

How did you do?

Slide #16 Now do the same for the next slide.

See if you can identify each number. Stop the machine and record your answers on page 10. When you have finished, start the tape again to hear the correct answers.

DIALOG FOR SAFETY CLOTHING TAPE

(continued)

The answers are: Number 1 - helmet

Number 2 - band

Number 3 - vest

Number 4 - bib

Number 5 - apron

Number 6 - gloves

If you didn't answer correctly, review page 9 of your module. Write the correct answer on page 10.

Now, turn to page 11 in your module. Read question Number 1.

Slide #17 Question Number 1 is: What is wrong with this picture? There are two things wrong. Write them on your page. Stop the tape and record your answers on page 11. When you have finished, start the machine again to hear the correct answers.

The two things wrong in Question Number 1 are

No vest (say and spell word)

No bib

Slide #18 Do the same thing for Question Number 2. There are five things wrong with the picture. Stop the tape and record your answers on page 11. When you have finished, start the machine again to hear the correct answers.

The five things wrong in Question Number 2 are:

No glasses

No apron

Only one glove

The bib and vest are unsnapped leaving the neck and chest unprotected.

DIALOG FOR SAFETY CLOTHING TAPE

(continued)

Slide #19 Do the same thing for Question Number 3. There are four things wrong with the picture. Stop the tape and record your answers on page 12. When you have finished, start the machine again to hear the correct answers.

The four things wrong in Question Number 3 are:

No glasses

No gloves

The neck is unprotected

The lighter

Note: A lighter is very dangerous because it could explode from the heat.

Slide #20 If you are sure you know all the parts of the welder's safety clothing, complete page 2 of your module and return it to your teacher when you finish.

Filmstrip and accompanying cassette tape for this instructional module are available at cost from the Demonstration Project. Please write for details to:

Fordson High School
Bilingual Demonstration Project
13800 Ford Road
Dearborn, Michigan 48126
Attention: Mr. Jim Petrie